

M E M O R A N D U M

TO: Environmental Committee
FROM: Mark Konz, Staff Liaison
DATE: May 10, 2007
SUBJ: May 16, 2007 Regular Meeting

A regular meeting of the Environmental Committee is scheduled to be held on **Wednesday, May 16, 2007 at 4:00 p.m.**, at the Minneopa Room located on the second floor of the Intergovernmental Center.

AGENDA

- 1. Call to Order**
- 2. New Business**
 - Paddington Parkway
 - Geoffrey Thornes
 - Hiniker Mill Road Proposal
- 3. Old Business**
 - Woodland Preservation
- 4. Adjournment**

MINUTES

Mankato Environmental Committee

2/21/07

Regular Meeting

Present: Ron Sundborg, Lon Smith, David Williams, Tamra Rovney, Dorothy Wrigley, Brian Hagberg, Janice Fox, John Zehnder, Ken Saffert, Mark Konz, and Julia Spencer

Guests: Richard Davis and Brooke Hacker, I&S Engineers

Absent: Joshua Burman, George Rosati

1. CALL TO ORDER

The meeting was called to order by Vice Chair Smith at 4:00 p.m. A quorum was present.

2. APPROVAL OF MINUTES

Mr. Williams made a motion to approve the minutes from January 17, 2007. The motion was seconded by Ms. Rovney and approved unanimously.

3. NEW BUSINESS

Officer Appointments

Mr. Sundborg moved to take nominations for the Chair position and Mr. Smith seconded.

Mr. Williams was appointed Chair and Mr. Zehnder was appointed Vice Chair unanimously.

Wenner Woodland Review

Mr. Konz explained that a new review was necessary because development plans have changed slightly as a result of the traffic study conducted for the development.

Ms. Hacker pointed out the changes to the site plan and that she and Mr. Hagberg had revisited the site to evaluate the trees affected by the changes. Mr. Hagberg added that the second visit also evaluated trees for safety and that some trees previously marked to save should maybe be removed and replaced by new more quality trees.

Mr. Saffert inquired whether the new proposal would affect the same amount of trees, more trees or fewer trees. Ms. Hacker stated maybe a few less, but that the replant after construction would be more and better quality than what currently exists.

Mr. Williams inquired whether trees questioned for safety were because of the risk of falling down. Ms. Hacker clarified that the trees questioned for safety were because of the angles they were at and they posed a risk of falling down and stand little chance of surviving construction and some contained a fungus.

Mr. Hagberg stated that he would follow up and assure that the marked trees were not damaged.

Ms. Fox inquired on the status of the Woodland Preservation Ordinance previously reviewed. Mr. Konz gave an update on the status.

Mr. Saffert pointed out that reviewing plans in this fashion was setting precedence. Mr. Smith concurred that this project was a learning experience that may change the way future projects are done.

Mr. Saffert moved to approve the amended plan. The motion was seconded by Mr. Williams and carried unanimously.

Lowe's Wetland Sequencing and Replacement Plan

Mr. Konz presented the proposal and pointed out that a similar plan on the same property had been reviewed with a different site plan.

Mr. Williams inquired whether this replacement was required to replace at a 2:1 ratio and if this plan met that requirement.

Mr. Konz explained that it exceeds the 2:1 requirement and explained that technically the wetland is replaced 1:1 and an upland buffer is created 1:1 for a total of 2:1.

Mr. Saffert pointed out that this plan differs from last time because the Technical Evaluation Panel (TEP) had requested an irregular border with bays and points and the new plan reflects that request. Mr. Saffert also stressed that the existing wetlands were degraded from agricultural activities, so he feels this new wetland will be an asset.

Ms. Wrigley inquired whether any wetlands in Mankato were natural. Mr. Konz stated yes, Rasmussen Woods and Mr. Saffert pointed out other natural wetlands.

Ms. Rovney made a motion to approve the wetland sequencing and replacement plan. The motion was seconded by Ms. Fox and carried unanimously.

Hosanna Lutheran Church Wetland Sequencing and Replacement Plan

Mr. Konz presented the report.

Mr. Williams inquired about purchasing credits in a different watershed. Ms. Rovney also inquired about runoff effects if credits are in a different watershed. Mr. Konz explained the reasoning and effects.

Mr. Davis explained that this watershed had been bought out and explained the procedure for purchasing credits.

Mr. Saffert pointed out that the church wanted to go east, but that landowner would not sell. He also stated that it would have been nice to add on to an existing wetland area, but developers have the right to choose the purchasing option legally unless the City develops an ordinance stating otherwise. Mr. Konz explained the replacement order for purchasing banking credits.

Mr. Williams asked whether creating an ordinance was in the foreseeable future. Mr. Konz explained that preliminary discussions have occurred in the Greenprint process but in order for an ordinance to be effective there needs to be alternatives available within the jurisdiction (i.e. a wetland bank).

Miscellaneous

Mr. Williams inquired about a proposed southern route for the DME railroad and its possible impacts. Mr. Saffert provided information and his opinion on the impacts.

Mr. Sundborg requested that Woodland Preservation Ordinance update be available for review at the next Environmental Committee meeting with suggestions for what needs to be accomplished to move forward.

4. ADJOURNMENT

There being no further business Mr. Williams moved to adjourn the meeting. The motion was seconded by Ms. Rovney and carried unanimously. The meeting was adjourned at 4:45 p.m.

M E M O R A N D U M

TO: Environmental Committee

FROM: Mark Konz, Staff Liaison

DATE: May 9, 2007

RE: Agenda Items

Paddington Parkway

The subject property was platted in 1978 as four lots and approved for a combination of single-family homes, townhouses, and multiple-family lots. The plan was changed in 1988 to restrict the development to single-family homes. However, Lots 1, 2 and 4 are large enough for an administrative lot split to create additional development parcels (refer to Attachment 2). The subdivision is currently undeveloped (no private or public development).

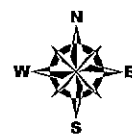
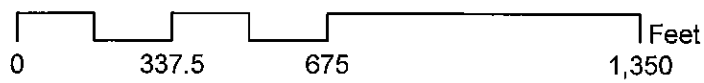
Instead of simply splitting the lots administratively, the applicant wishes to resubdivide the property and create 6 new lots for single-family development. Replatting will also address the vacation and rededication of the existing right-of-way (currently unimproved), designating lots with the proper setbacks from slopes, and formalizing a woodland conservation plan for the property.

The resubdivision plan shows a development concept that does not impact the environmentally sensitive areas – slopes. The plan also conserves the woodlands within the slopes and in the development areas. Staff would support the subdivision provided the topography is confirmed in the field, woodland conservation is addressed in covenants similar to Oak Marsh, and a corridor is dedicated in the ravine for a future natural trail that would connect the South Brook/Kensington area to the City land located west of Stoltzman.

Staff received a comment from an adjoining property owner that the ravine spur is actively eroding. This should also be examined by the Committee and the design engineer. The original plat depicted the location of the roadway in the subject ravine area. The new plan shifts the road to the north.

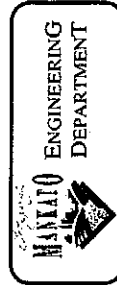
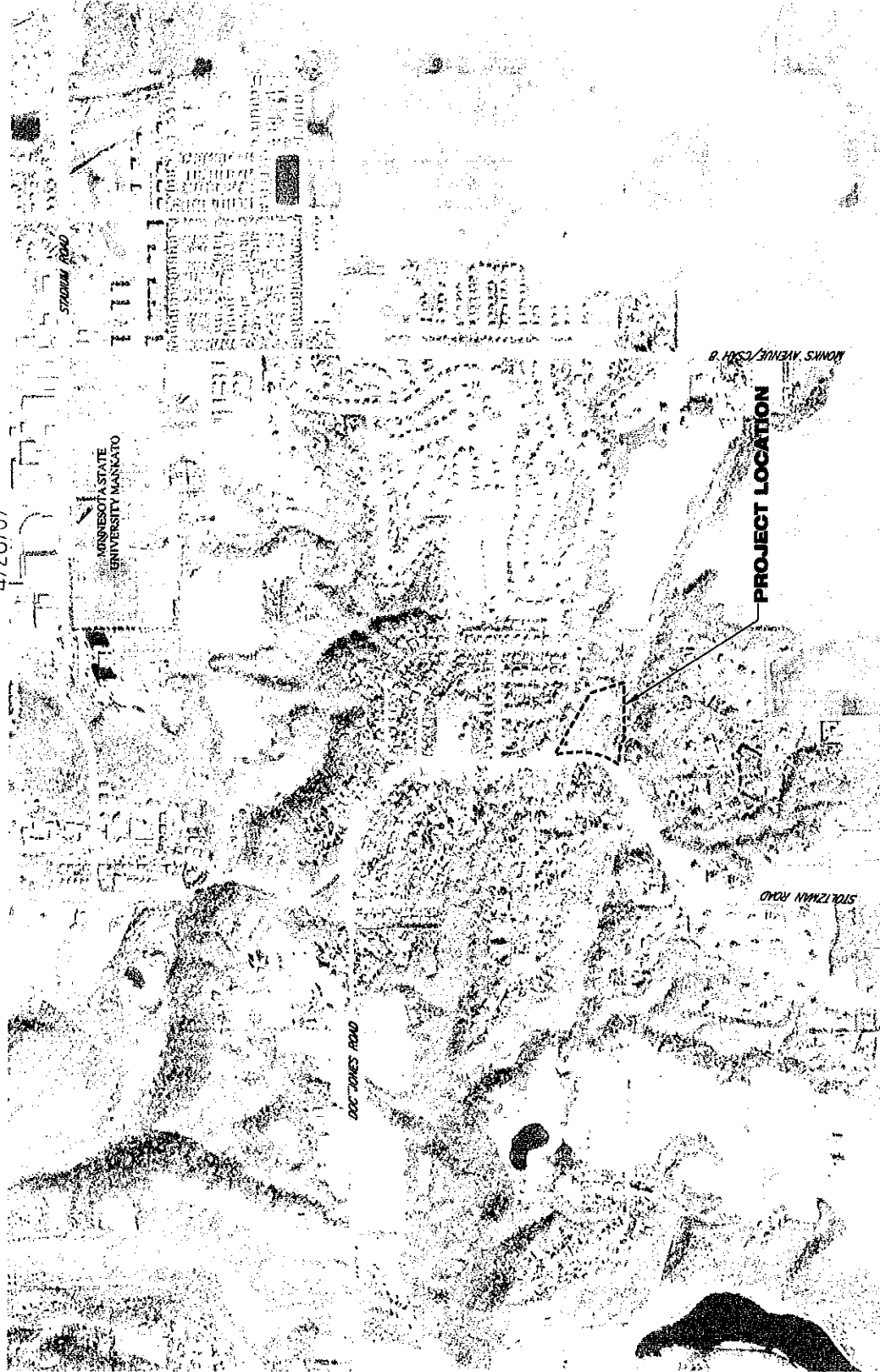
The applicant is also amending a wetland exemption previously approved for the proposed development. The square footage of wetland being impacted will not change but rather the location of impact will be altered.

The drawings submitted depict alternatives for the layout of the subdivision and lots. Approval of the layouts will be contingent upon meeting the appropriate setback requirements.



PADDINGTON PARKWAY

MANKATO, MINNESOTA
LOCATION MAP
4/26/07



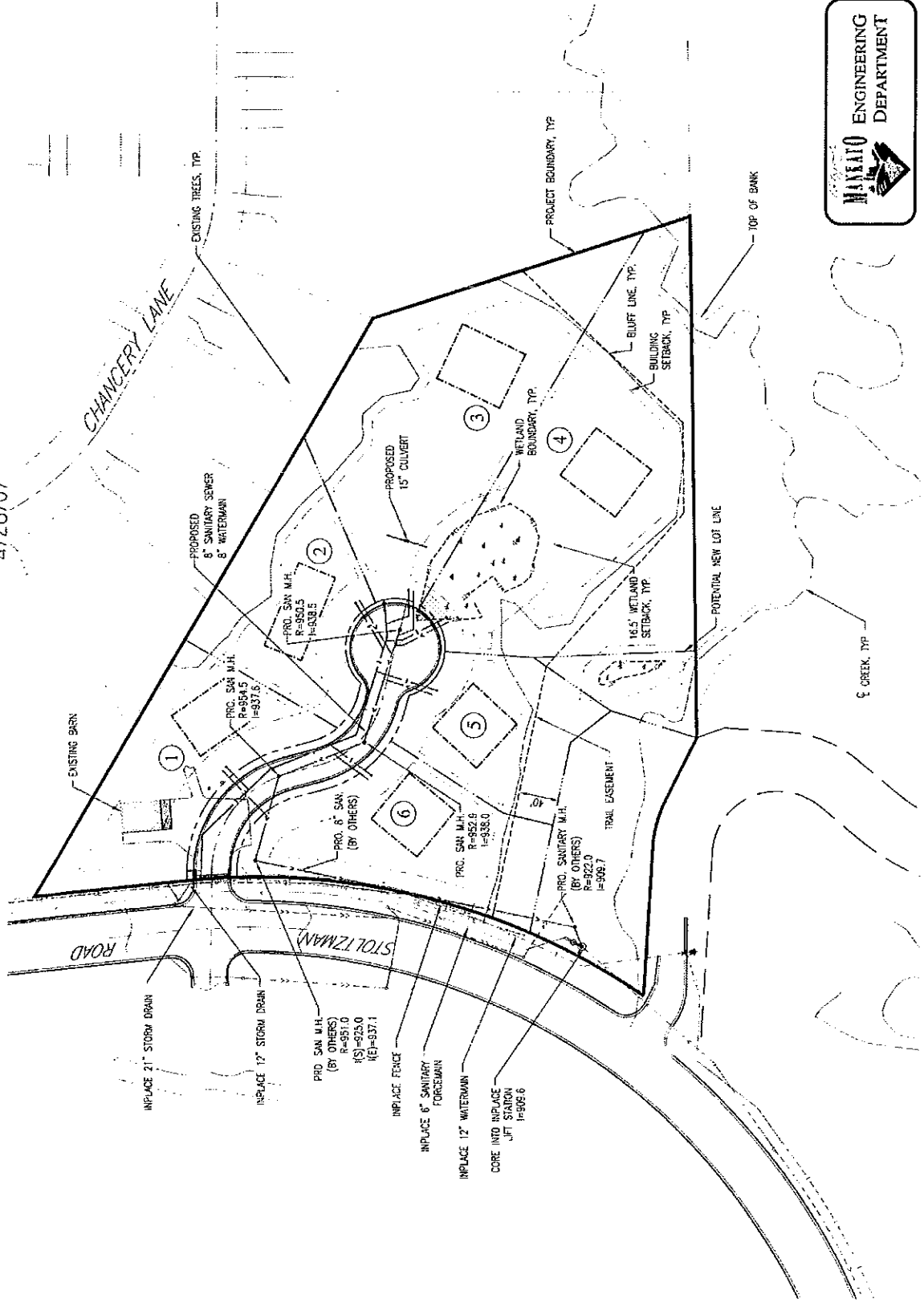
I&S Engineers & Architects, Inc.
One firm, unlimited
Offices in Minnesota
and Faribault, Minnesota
Mankato: 507-387-4883
Faribault: 507-331-1000
Web: www.i-s-inc.com

IS

Architectural Structural Civil Mechanical
Electrical Surveying Land Surveying
Interior Design Landscape Architecture

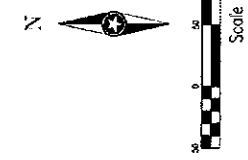
PADDINGTON PARKWAY

MANKATO, MINNESOTA
UTILITY PLAN
4/26/07



NOTE:
PERMIT REQUIRED BY OWNER FOR
CONSTRUCTION OF UTILITY SERVICES
THROUGH WETLAND TO LOT 4.
WETLAND SHALL BE RESTORED TO
NATURAL STATE AFTER CONSTRUCTION.

DIRECT WETLAND IMPACT
(400 SQ. FT.)



I&S Engineers & Architects, Inc.
Civil, Mechanical, Electrical, and Sanitary Engineers
Office in Mankato, Minnesota
Mankato 507-387-6651
Fergus Falls 507-331-1500
Web: www.i-s-engineers.com

Structural, Mechanical, Electrical, and Sanitary Engineers
Natural Resources, Land Surveying, Interior Design, Landscape Architecture

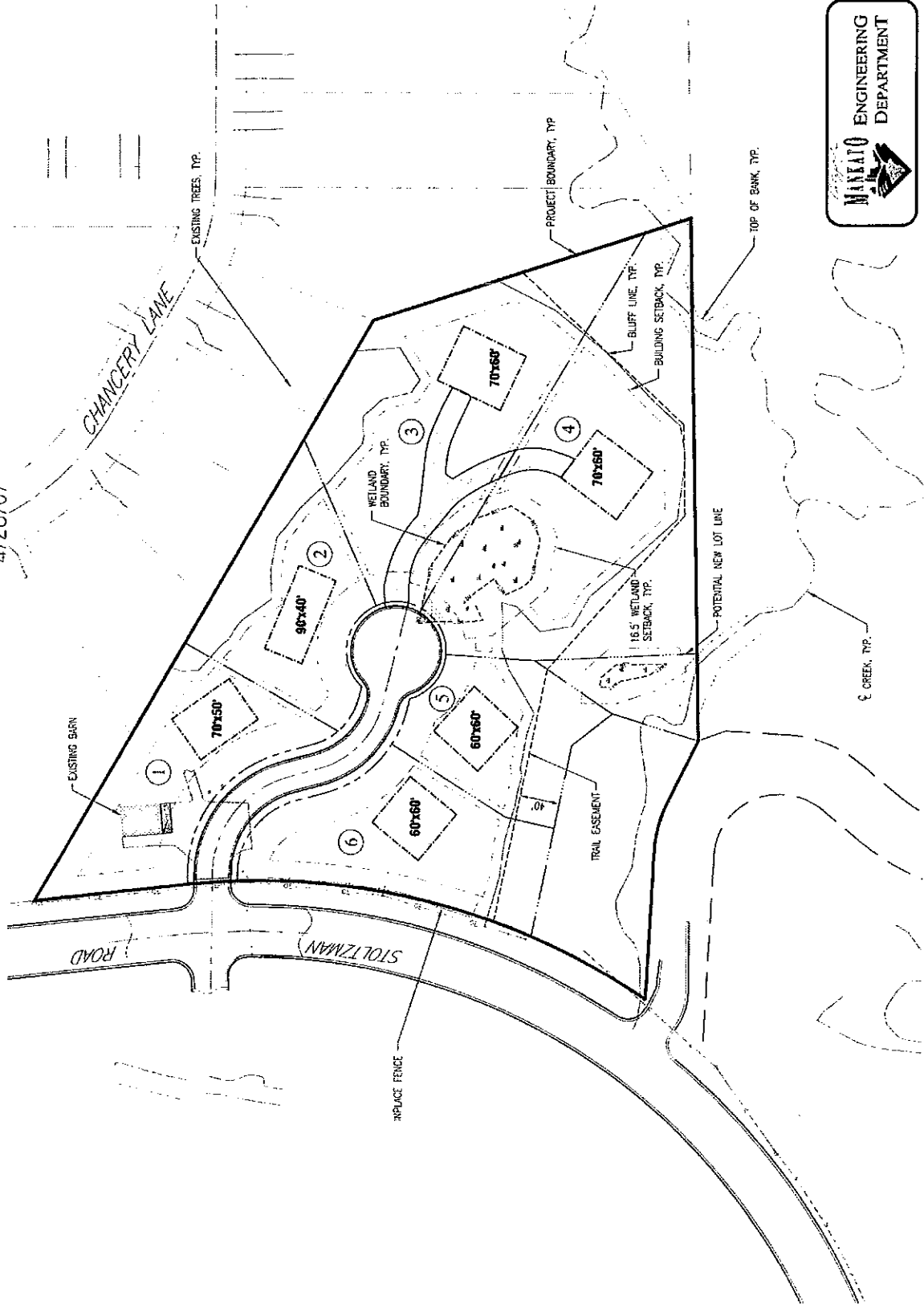
MAYNARD ENGINEERING DEPARTMENT

PADDINGTON PARKWAY

MANKATO, MINNESOTA

OPTION I

4/26/07

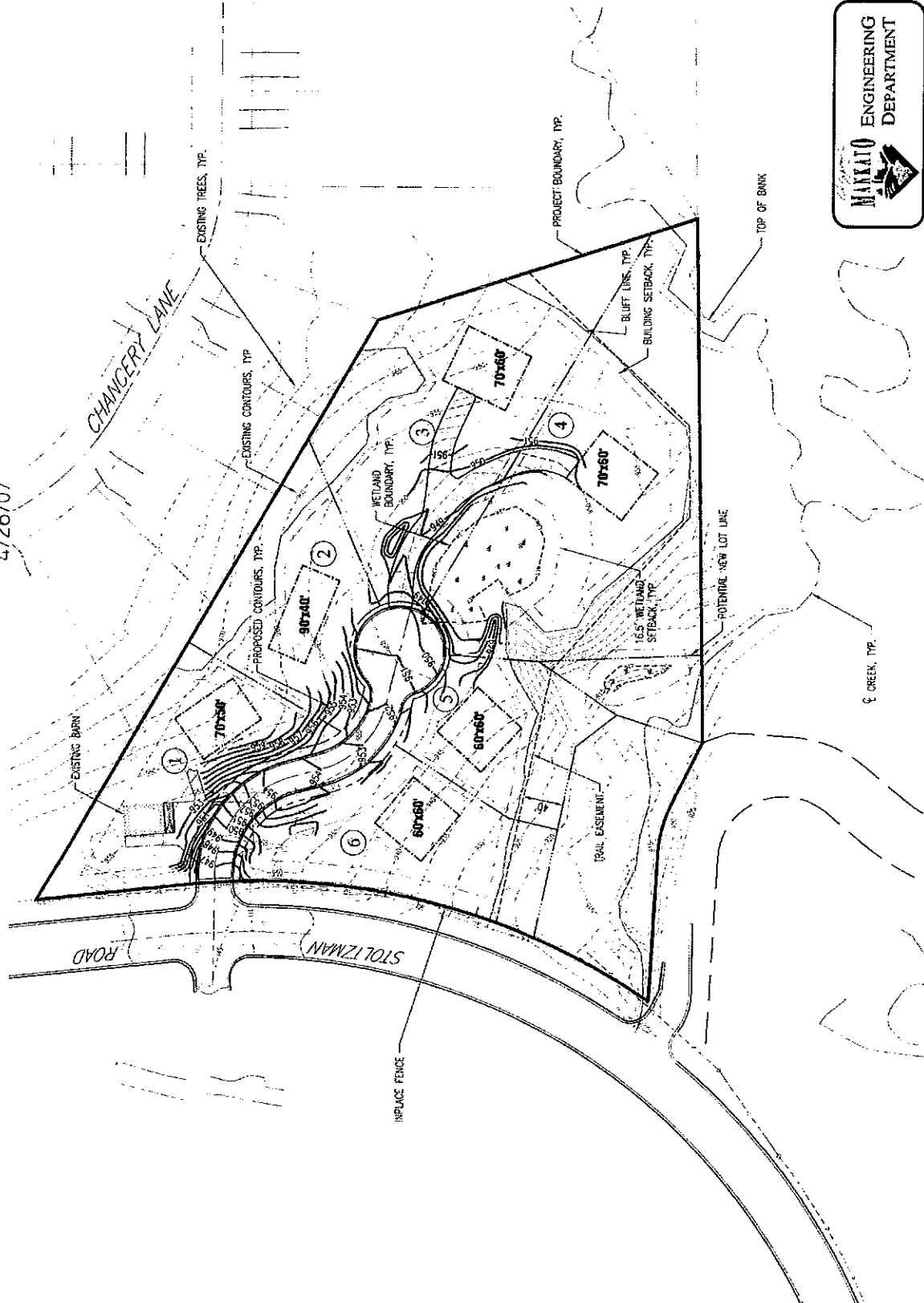


I&S Engineers & Architects, Inc.
 One fine, sustainable
 Office in Mankato,
 and Fairbairn, Minnesota
 Mankato: 507-387-6641
 Fairbairn: 507-331-1500
 Web: www.i-s.com
 Civil, Mechanical, Structural, Electrical, Architectural, Surveying, Planning, Landscape Architecture

MANKATO
 ENGINEERING
 DEPARTMENT

PADDINGTON PARKWAY

MANKATO, MINNESOTA
OPTION 1 - GRADING PLAN
4/26/07



POTENTIAL DRAINAGE
DIRECT WETLAND IMPACT
(400 SQ. FT.)

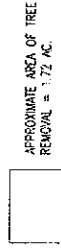
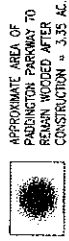
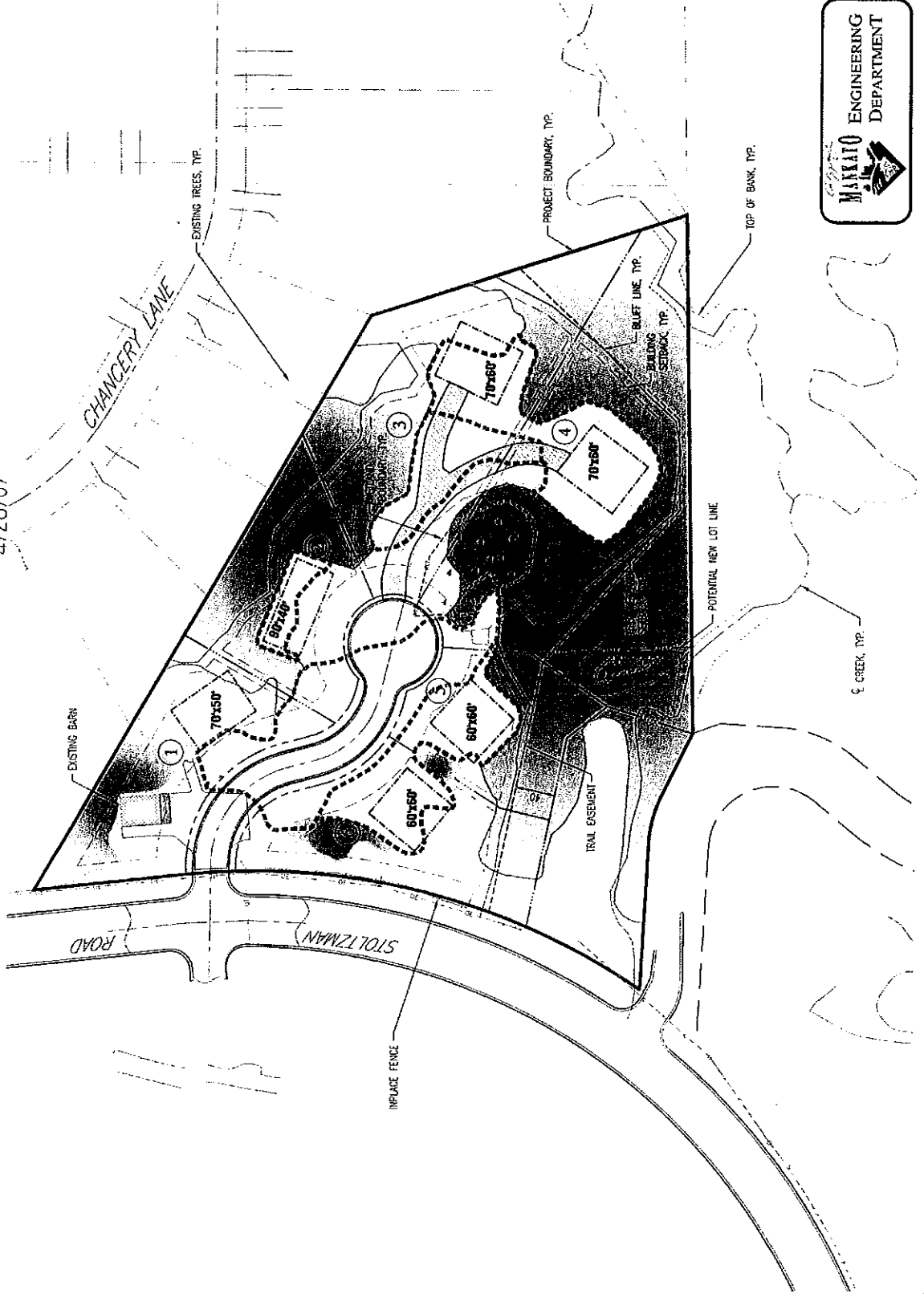


I&S Engineers & Architects, Inc.
One firm, can win it all.
Office in Mankato and Fitchburg, Minnesota
Mankato: 507-337-6551
Fitchburg: 507-337-1500
Web: www.i-s.com
Structural, Mechanical, Electrical, Sanitary, and Highway Engineering

MANKATO ENGINEERING DEPARTMENT

PADDINGTON PARKWAY

MANKATO, MINNESOTA
 OPTION I - WOODLAND PRESERVATION PLAN
 4/26/07



POTENTIAL DRIVEWAY



I&S Engineers & Architects, Inc.
 One Elm Street, Suite 200
 Mankato, Minnesota 56001
 Phone: 507-387-4661
 Fax: 507-331-1500
 Web: www.i-s.com

Services:
 Architectural, Structural, Mechanical, Electrical, Sanitary, Landscape Architecture, Interior Design, Surveying, Planning, Engineering

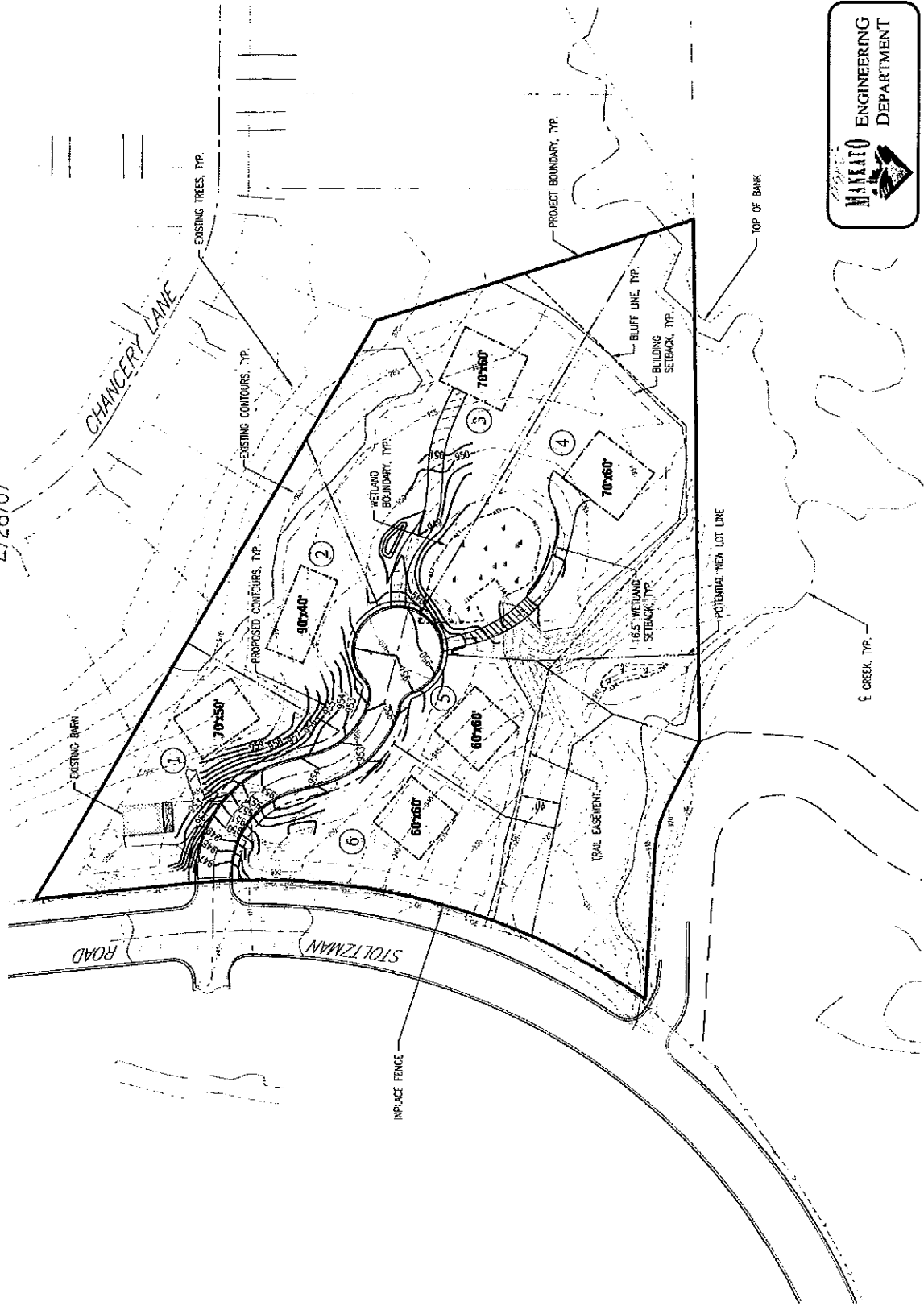
MANKATO, MINNESOTA
OPTION 2
4/26/07

[illegible]

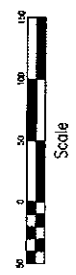
MAKATO
ENGINEERING
DEPARTMENT

PADDINGTON PARKWAY

MANKATO, MINNESOTA
OPTION 2 - GRADING PLAN
4/26/07



	POTENTIAL DRIVEWAY
	DIRECT WETLAND IMPACT (400 SQ. FT.)
	BRIDGING AREA



I&S Engineers & Architects, Inc.
One firm, two disciplines
Office: in Mankato
and Faribault, Minnesota
Mankato: 507.387-6651
Faribault: 507.331-1500
Web: www.i-s-e.com

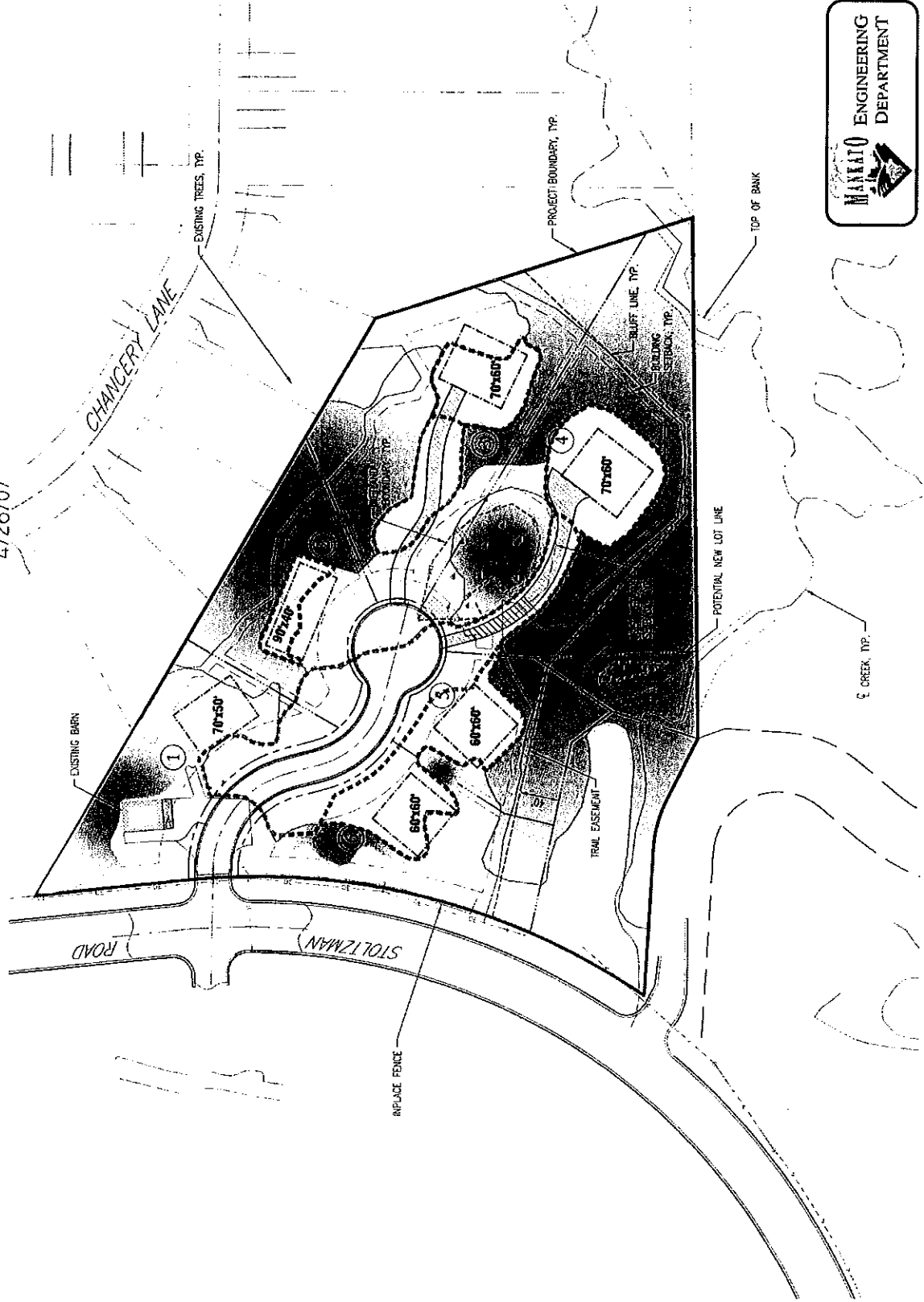
IS

Architectural
Electrical
Interior Design
Structural
Mechanical
Civil
Land Surveying
Landscape Architecture

MANKATO
ENGINEERING
DEPARTMENT

PADDINGTON PARKWAY

MANKATO, MINNESOTA
 OPTION 2 - WOODLAND PRESERVATION PLAN
 4/26/07



APPROXIMATE AREA OF
 PADDINGTON PARKWAY TO
 REMAIN WOODED AFTER
 CONSTRUCTION = 3.37 AC.

APPROXIMATE AREA OF TREE
 REMOVAL = 1.63 AC.

POTENTIAL DRIVEWAY
 DIRECT WETLAND IMPACT
 (400 SQ. FT.)
 BREEDING AREA



I&S Engineers & Architects, Inc.
 One Elm Street, Suite 200
 Mankato, Minnesota 56001
 Phone: 507-387-8651
 Fax: 507-331-1500
 Web: www.i-s.com

Services:
 Architectural, Mechanical, Electrical, Structural, Surveying, Interior Design, Landscape Architecture

MANKATO ENGINEERING DEPARTMENT

Environmental Committee Memo
May 10, 2007
Page 2 of 3

Geoffrey Thornes

The applicant is requesting review of a proposed lot-split for the property located at 1501 N. 5th Street. The subject property is a "through lot" as it has frontage on N. 5th Street and N. 6th Street. The proposal is to split the existing lot and create two new parcels. The western parcel will contain the existing house and detached garage. The eastern parcel will be developed as a new dwelling unit.

Based on the Environmental Sensitive Areas Map and Mankato City Code Section 10.82 Subdivision 10, the applicant's proposal would impact a slope. The slope area is located on the far eastern portion of the proposed lot-split along the N. 6th Street frontage (eastern parcel). In order to access this lot, the applicant would be required to impact an environmentally sensitive area for the construction of the driveway.

Staff would like to Environmental Committee make a recommendation as to whether the area should be classified as environmentally sensitive or if the slope is the result of previous construction. If the area is environmentally sensitive, should the applicant be allowed to fill within the slope area for the purpose of constructing a driveway?

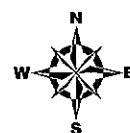
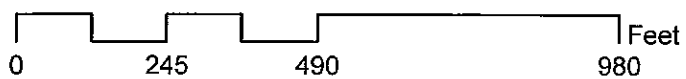
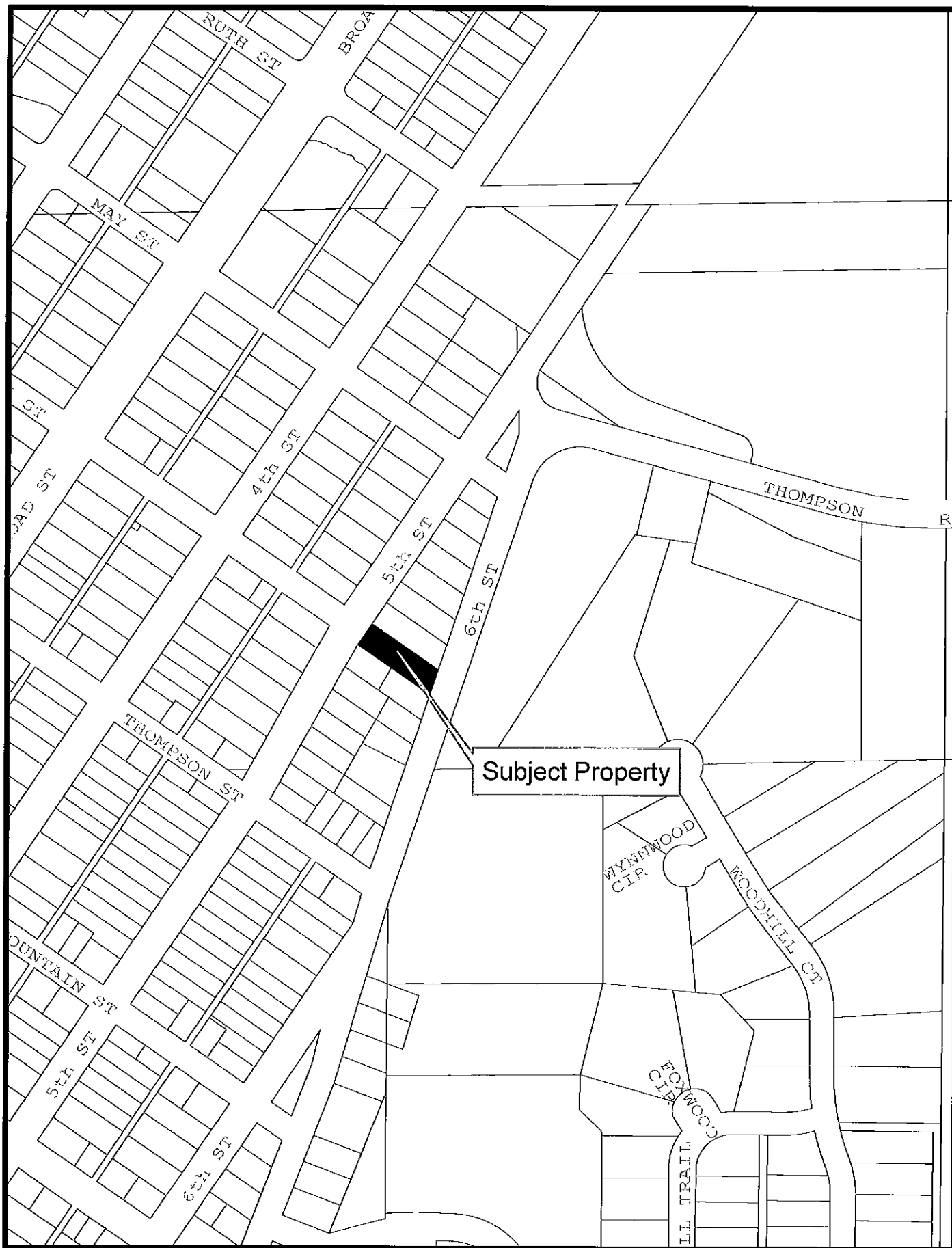
Hiniker Mill Road Development

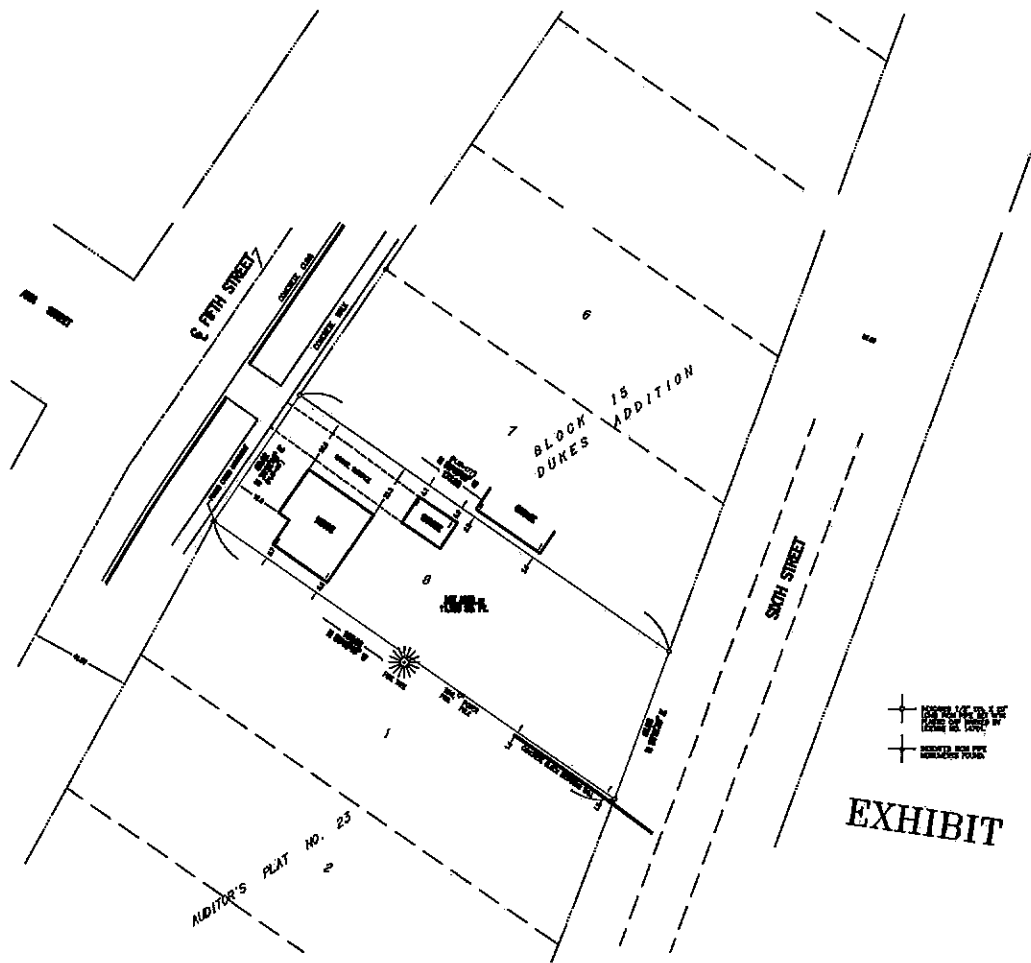
The subject property is in a preliminary development stage. The applicant is proposing a large multiple-family dwelling development in this location. An issue with the development is the necessity to provide a secondary access to the site due to the density proposed for the area and standards set forth in Mankato City Code.

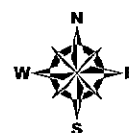
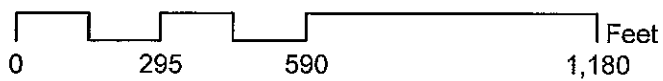
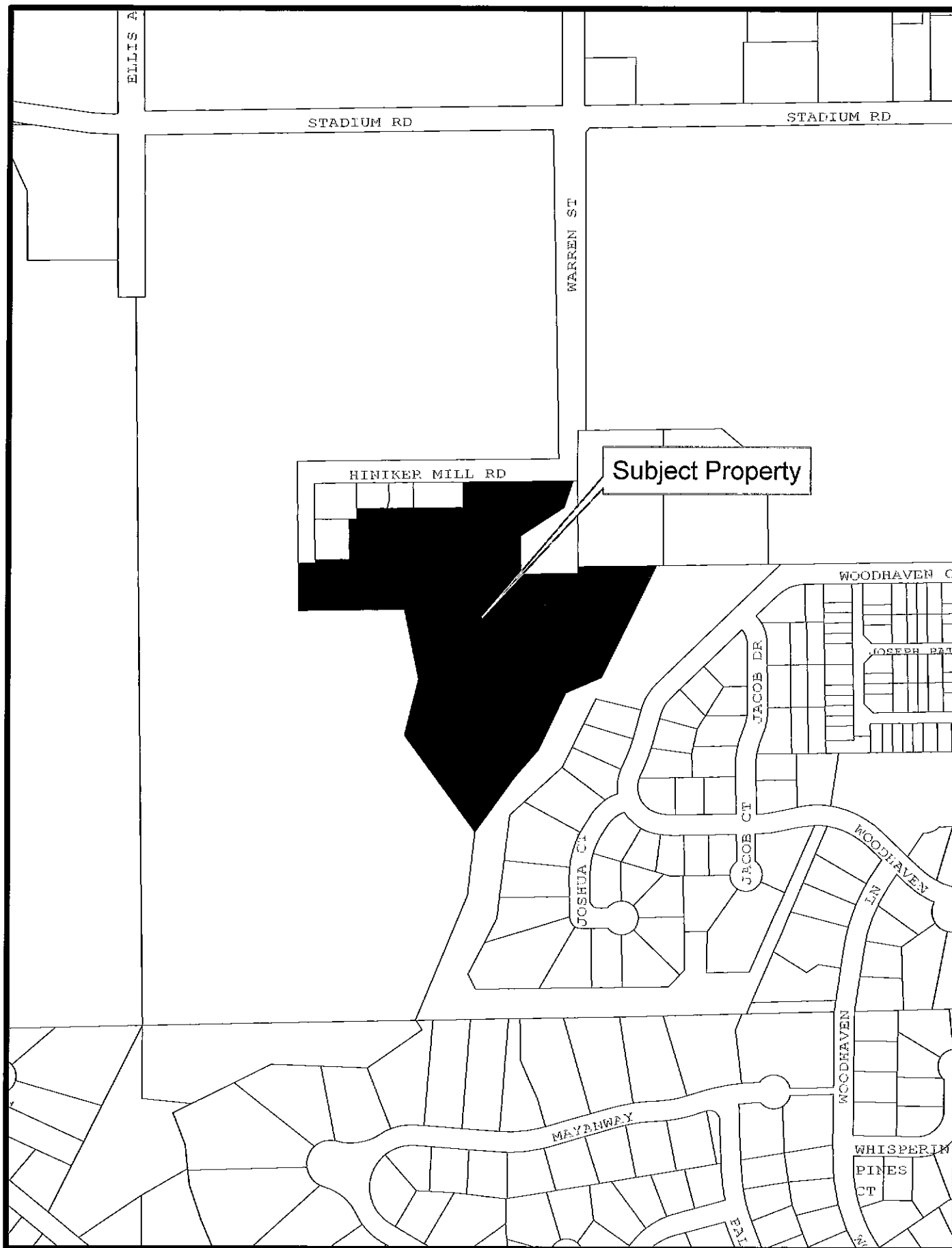
The existing access to the subject property is to the north which connects to Warren Street. This connection is over 1,200 lineal feet from the proposed development. The site has significant limitations for providing the secondary access; a stream meanders along the southern boundary of the site; west of the site is land currently owned by Minnesota State University, Mankato; and a recently constructed wetland is located to the east of the development.

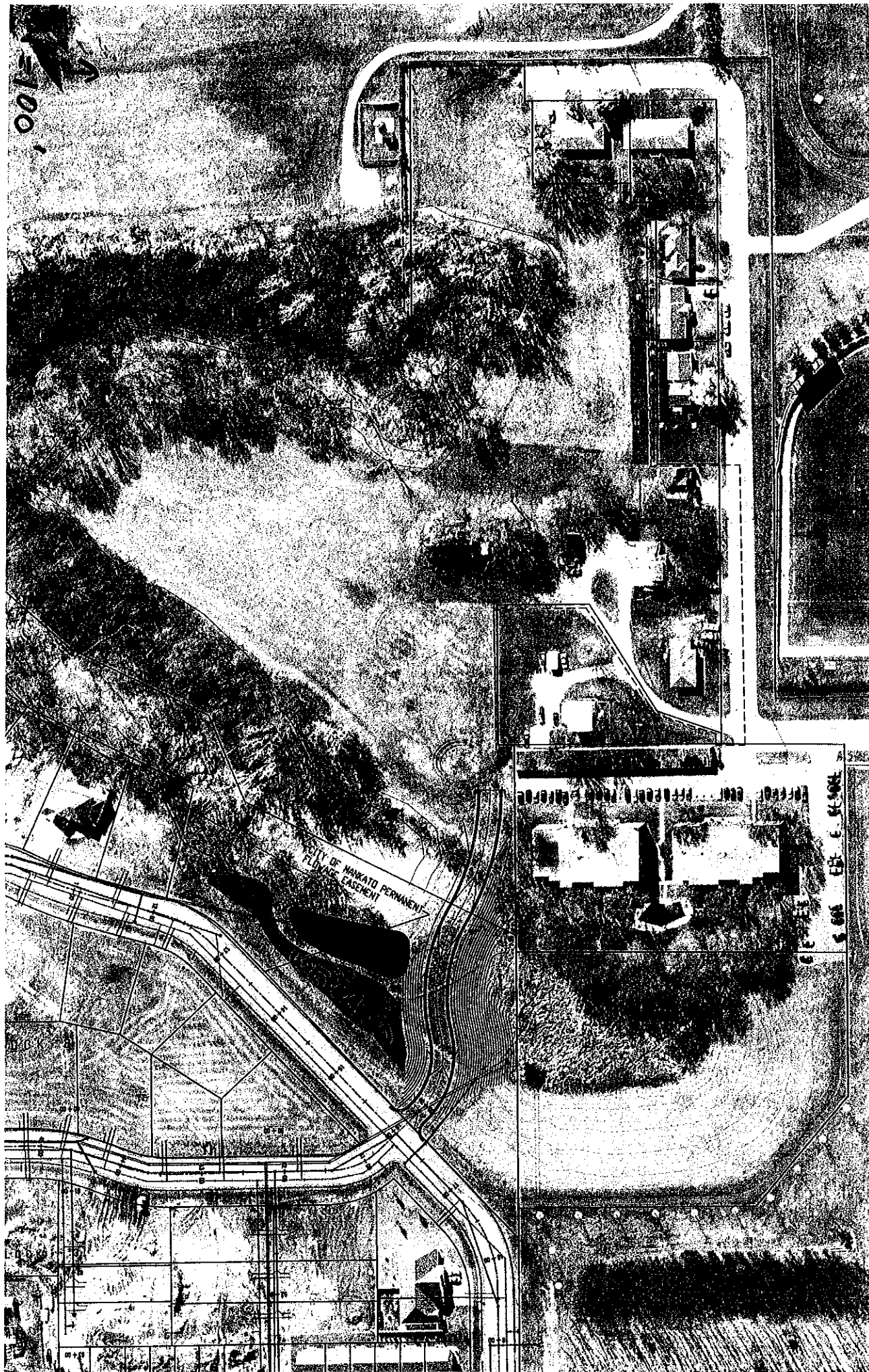
The applicant's proposal is to construct a roadway connection to the east of the subject property. The new road would connect to Woodhaven Circle. This proposal would require the applicant to impact the wetland area.

Staff is requesting comments pertaining to the proposed street layout and proposed impacts to the wetland area. Additional submittals to the Environmental Committee will be required if any impacts will occur to the slopes, wooded areas, or wetlands.









Woodland Preservation

Attached is a copy of the revised woodland preservation ordinance. The ordinance takes into consideration the slopes previously omitted from the ordinance. Staff has been in contact with Blue Earth County, Lime Township, and Mankato Township about adopting similar ordinances.

In addition to the Planning Commission comments; staff would like to address:

1. The ordinance should be part of a natural resource preservation ordinance – incorporating grasslands, wetland, and woodlands (Stress native species preservation, replacement, restoration).
2. The ordinance should examine pre-settlement vegetation regimes and required preservation of existing resources or reestablishment provision of at least 10 percent in fully converted areas to pre-settlement species.
3. Woodland definition must include types of species. Simply defining based on area and canopy is problematic. Must include species and even possibly disturbed “edge” considerations.
4. Replacement criteria should be incorporated such as with wetlands and allow flexibility for degraded wooded areas.

[10.82. Special Provisions Applicable to Specific Permitted and Conditional Uses]

→11.1. Environmentally Sensitive Areas, Wetlands....

→11.2. Environmentally Sensitive Areas, Woodlands.

A. Findings and Purpose.

1. It is the finding of the City Council that woodlands within the City, as defined by this Section, constitute critical environmental resources for the health, safety, and general welfare of the citizens of the City, through, respectively: the absorption of air pollutants, the screening and reduction of noise, wind, heat, and visual clutter, and the filtering and redirection of precipitation to the saturated zone for use as potable water supply; the reduction of wind and water erosion of soils, stabilization of slopes, and reduction of flood effects; and the maintenance of the general aesthetic and historic value of the City, provision of areas for natural recreation and education, and provision of unique and essential habitat for plant and animal residents of the City.
2. The City additionally finds that the protection of environmental resources is a recognized matter of concern of the citizens of the State of Minnesota, as provided in the Minnesota Environmental Policy Act, Minn. Stat. 116D.01.
3. Therefore, the purpose of this Section is to promote the health, safety, and general welfare of the citizens of the City through the protection of woodland environmental resources contained in properties where development or alteration of the property might damage or remove all or part of the woodland.

B. Definitions.

1. City Forester means the City Official designated as City Forester under City Ordinance 9.73.2.
2. Conservation Easement has the meaning assigned under Minn. Stat. 84C.01, as amended.
3. Crown has the meaning assigned in the Forest Ecosystem Management Assessment Team report "Forest Ecosystem Management" (1993); the upper part of a tree or other woody plant that carries the main system of branches and the foliage.
4. Drip Line means an imaginary vertical line that extends downward from the outermost crown edge of a fully leafed tree to the ground.
5. Tree has the meaning assigned in U.S. Forest Service Resource Bulletin NC-158, "Minnesota Forest Statistics, 1990, Revised" (1995); a woody plant usually

having one or more perennial stems, a more or less definitely formed crown of foliage, and a height of at least 12 feet at maturity.

6. Woodland means a contiguous group of trees with an average crown height of 15 feet or greater whose combined crowns, when fully leafed, cover a minimum of 80% of an area of one acre or more, and which is composed of a related canopy, understory, and ground vegetation. Portions of a woodland separated from the remainder by any act occurring after the date of implementation of this Section shall continue to be considered a contiguous group of trees with the remainder unless determined to be no longer a woodland by the City Forester.

7. Woodland Area means the ground area contained within the drip lines of all trees contained in a woodland.

C. Exemptions. The following activities are not subject to the further limitations of this Section:

1. Removal of trees or other vegetation from woodlands or portions of woodlands contained on any private property subject to the environmental review process of City Ordinance 2.41.5 where the activity for which the application is submitted will not materially affect the woodland contained on the property.

2. Removal of trees or other vegetation from woodlands where such action is necessary to protect public health, protect property from damage, or to restore public order.

3. Removal of dead, damaged, diseased, or infested trees or vegetation from woodlands where such action is determined to be reasonably necessary by the City Forester or by the property owner, subject to the approval of the City Forester, to protect the health of the woodland or surrounding trees, or where such trees or vegetation are public nuisances under City Ordinance 9.73.4.

4. Removal of trees or vegetation from woodlands as necessary for the provision of public utilities, provided such removal is the least damaging reasoned alternative and is accomplished in the reasonably least damaging manner .

5. Removal of trees or vegetation from woodlands established and maintained for the purpose of nursery stock growing and licensed by the Minnesota Department of Agriculture under Minn. Stat. Chapter 18H, as amended,

Deleted: of tree farming and licensed by the Minnesota Department of Agriculture.

6. Removal of trees or vegetation from woodlands conducted in accordance with a Woodland Stewardship Plan or Forest Stewardship Plan approved by the Minnesota Department of Natural Resources.

Formatted: Pattern: Clear (Light Green)

7. Removal of trees or vegetation from woodlands when such trees or vegetation are noxious weeds designated by the Minnesota Department of Agriculture as listed in Minn. R. 1505.0730-1505.0732, or are invasive terrestrial or aquatic plants designated by the Minnesota Department of Natural Resources as listed in the publication "Minnesota Invasive Non-native Terrestrial Plants", as published in 2003 and as amended.

Deleted: 6

8. Any actions on a property subject to subsection D.2. of this Section for which the applicant has completed the required woodlands examination, where no woodlands subject to this Section were found, and for which the City has reviewed and accepted the examination summary.

Deleted: 7

9. Any action by the City for the provision of streets, trails, sidewalks, or other essential public improvements if the action has been determined by the City Council to be critical to the safety or general welfare of the citizens of the City and no other reasonable alternative is determined.

Deleted: 8

D. Applicability.

1. The provisions of this Section shall apply to any woodlands contained wholly or partly within any City property or wholly or partly within any private property subject to the environmental review process of City Ordinance 2.41.5. and not exempted above.

2. The provisions of this Section shall also apply to any woodlands contained wholly or partly within any private property for which an otherwise subject application under City Ordinance 2.41.5. has been submitted to the City but which is not located within a previously designated sensitive area. The applicant for any such property shall examine the property to determine the presence on the property of any woodlands or portions of woodlands as defined in this Section and shall submit a written summary of the examination with and at the time of application.

3. The provisions of this Section shall also apply to any act or combination of acts of land clearing or tree removal not exempted above, wherein such clearing or removal is planned to or may reasonably result in removal of:

a. greater than 25% of the area in existence at the date of implementation of this Section of any woodland.

Formatted: Indent: Left: 1.5"

Deleted: the

Deleted: woodland

b. any portion of a woodland located on a hillside or ravine slope of 17.6 percent or greater or within ten (10) feet of the bluff line as defined under City Ordinance 10.82.10.

Formatted: Font color: Dark Green

Formatted: Indent: Left: 1.5",
Pattern: Clear (Light Green)

Formatted: Font color: Green

Formatted: Indent: Left: 1.5"

4. Any act or combination of acts meeting subsection D.3. of this Section shall be deemed a Substantial Land Alteration and subject to the permit requirements of

Deleted: Such an acts or combination
of acts

City Ordinance 10.82.9 and the environmental review process of City Ordinance 2.41.5.

E. Requirements.

1. No application for any action subject to subsection D.1., D.2., or D.3. of this Section shall be approved by the City until the applicant has demonstrated compliance with subsection E.2. through E.5. of this Section.
2. In addition to the submittal requirements specified elsewhere, the applicant for any action subject to this Section and not exempt under C.7. above shall prepare and submit a plan at a scale required in City Ordinance 10.90.6. showing the location and extent of all woodlands or portions of woodlands on the property and the impact of the applied-for action on the woodlands. An application containing multiple alternative actions shall be accompanied by an appropriate plan for each alternative.
3. Upon application for a subject action, the applicant shall specify in the application how the subject action will be completed such that:
 - a. if the property contains only a single family dwelling at the time of application and is not to be subdivided, not less than 60% of the woodland area contained within the subject property in existence on the effective date of this Section will be maintained in a natural state.
 - b. if the property contains other than a single family dwelling, is to be subdivided, or exists at the time of application in a native, undisturbed state or a state of regrowth after being previously utilized for agriculture, not less than 70% of the woodland area contained within the subject property in existence on the effective date of this Section will be maintained in a natural state.
 - c. reasonable efforts are made by all property owners to ensure that maintained woodland areas are contiguous with portions of the woodland outside of the subject property.
4. The City Forester shall review each application within the time limits otherwise allotted to the City for the application under all other controlling City Ordinances, State, or Federal laws. The City Forester may refer applications to the Environmental Committee under City Ordinance 2.41.5. or other appropriate City agency for additional consideration. The City Forester shall submit a recommendation to the Planning Commission or other appropriate agency of the City as to whether the application complies with the requirements of this Section. In determining the application's compliance with this Section, the City shall consider:

- a. the degree of compliance with subsection 3.a. or 3.b. above; and
 - b. the extent to which the applied-for action may be achieved with a minimum of woodland area clearing; and
 - c. the desirability of preserving any specific portion of the subject woodland or woodlands due to its unique size, age, identity, or history; and
 - d. the extent to which the woodland area to be cleared will be subject to additional environmental degradation as a result of the clearing, including erosion, stormwater runoff, and altered use; and
 - e. the presence, proximity, and characteristics of any woodlands surrounding the application property and the effect all subject clearing will produce on the aesthetic characteristics of the local area of the property and the health of the surrounding woodlands; and
 - f. the likelihood, if any, that any portion of the subject woodland or woodlands will be subject in the reasonable future to the exemptions of subsection C of this Section.
5. The applicant may utilize any one or combination of the following methods to meet the requirements of subsections 3.a. or 3.b.:
- a. Dedication of a conservation easement to the City encompassing all or portions of the woodland area. The conservation easement must specify the limitations on use of the woodland area applicable to the landowner, the access rights of the City to the easement, and any adjunct uses, including but not limited to recreational trails, specified for the conservation easement. This subsection shall not require the City to accept any easement which the City reasonably determines is detrimental to the health, safety, or general welfare of its citizens or the purpose of this Section.
 - b. Declaration and application of an enforceable deed covenant restricting the clearing and incompatible use of all or portions of the woodland area. The covenant must specify the limitations of use of the woodland area applicable to the landowner and create a responsible body for enforcement of the covenant if the property is to have multiple landowners. The covenant must specify a mechanism to ensure that the woodlands are protected from removal or damage irrespective of any agreed-upon changes to the covenant by the responsible body or the landowners. This subsection shall not require the City to accept any covenant which the City reasonably determines is detrimental to the health, safety, or general welfare of its citizens or the purpose of this Section.

- c. Retained possession through plat of all or portions of the woodland area by the applicant such that such portions of the woodland area are not cleared or damaged. The applicant, as landowner, shall be responsible that the woodlands on the retained property are not cleared or otherwise damaged in trespass by the adjacent landowners.
- d. Sale or deed to the City of all or portions of the woodland area for protection as undeveloped or semi-developed recreational or conservation lands. This subsection shall not require the City to purchase or accept without compensation any lands.
- e. Any other action which the applicant can demonstrate to the City will reasonably protect the subject woodland areas in perpetuity and not subject the City to additional management burden or cost.

F. Implementation.

1. The applicant must ensure that the requirements of this Section are complied with throughout any construction process and during any subsequent or simultaneous sale of the property or portions of the property. The applicant must ensure at least that:
 - a. All employees, contractors, and visitors to the subject property that may, through deliberate or inadvertent act remove or damage any portion of a subject woodland, receive documented instruction in the location of the subject woodland areas and the management practices the applicant has emplaced to protect those woodland areas; and
 - b. All subject woodland areas are clearly and securely marked prior to and throughout all construction with continuous fencing of at least 48 inch height of sufficient strength and stability to remain vertical in all reasonable weather conditions; and
 - c. Any construction traffic, to include daily foot traffic and all vehicle traffic, through any subject woodland area is restricted to areas provided with a minimum layer of 12 inches of wood chips or other cushioning material surfaced with plywood, chain-link mesh, or other pressure-distributing surface.
2. The City Forester or any other staff designated by the City may enter the application property at any reasonable time to ensure the property's compliance with this Section.
3. Violation of any of the requirements of this Section shall be cause for the rescission of any permit or approval issued by the City to the applicant in

compliance with this Section until such time as the City Forester determines that the violation has been corrected.

4. The City may require the applicant or responsible party to remediate any damage to subject woodland areas caused by deliberate or inadvertent violation of any of the requirements of this Section. The City may require any such remediation, whether by the applicant or any other party, to be completed under the direction and to the approval of the City Forester. In lieu of such remediation, the City may assess the applicant or responsible party reasonably estimated or actual costs for such remediation and perform the remediation itself or through contract.

5. The applicant or any other responsible party shall have the right to appeal any denial or negative action required by the City under this Section to the City Council and to the appropriate legal venue.

6. In addition to the above, the enforcement provisions of City Ordinance 10.96 shall apply fully to this Section.

References

Michigan Appellate Digest; West Bloomfield Charter Township v. Karchon
<http://courtofappeals.mijud.net/Digest/newHTML/14860921.htm#14860921004>

Phytosphere Research; Tree Protection Ordinances and Oaks
<http://phytosphere.com/publications/Oakord.htm>

The Tree Trust; TreeOrd; Himanga, K. and Bedker, P., 2001,
TreeOrd, a tool for Tree Ordinance Development.

United States Forest Service; National Woodland Owner Survey
http://www.fs.fed.us/woodlandowners/quest/nwos_mn_4_3.pdf

City of Falls Church, Virginia; Tree Preservation During Construction
<http://www.ci.falls-church.va.us/government/developmentServices/documents/TreePreservationDuringConstruction.pdf>

Minnesota Dept. of Natural Resources; Conserving Wooded Areas in Developing Communities
<http://files.dnr.state.mn.us/forestry/urban/bmps.pdf>

California Dept. of Forestry; Guidelines for Developing and Evaluating Tree Ordinances
<http://www.isa-arbor.com/publications/tree-ord/resources/treeord.pdf>

Forest Ecosystem Management Assessment Team; Forest Ecosystem Management. (1993)
<http://pnwin.nbii.gov/nwfp/FEMAT/PDF/FEMAT.pdf>

United States Forest Service; NC-158: Minnesota Forest Statistics, 1990, Revised. (1995)
http://ncrs.fs.fed.us/pubs/rb/rb_nc158.pdf

Reviewed Woodland Protection Ordinances

City of Burnsville, Minnesota Ordinances 10-8-3 and 10-8-9
<http://66.113.195.234/MN/Burnsville/11008000000003000.htm>, [/11008000000009000.ht](http://11008000000009000.htm)

City of Carmel, Indiana Ordinance 7.07
<http://www.ci.carmel.in.us/services/DOCS/DOCSCAO.htm#SCO>

City of Novi, Michigan Ordinance 37
<http://library4.municode.com/mcc/DocView/11201/1/286/287, /288, /289>

City of Orchard Lake, Michigan Ordinance 12.07
<http://www.cityoforchardlake.com/woodlands.html>

City of Watertown, Wisconsin Ordinance 18.506
<http://www.ci.watertown.wi.us/Ordinances/Chapter%2018-Article%2005.pdf>

Green Oak Township, Michigan Ordinance 9.13
<http://www.greenoaktwp.com/pdf/ZoningOrdinance2004.pdf>

Hunterdon County, New Jersey Draft Ordinance
http://www.co.hunterdon.nj.us/planning/ordinances/toolbox/Environmental_Toolbox-Woodlands.pdf

Lycoming County, Pennsylvania Ordinance 5230
<http://www.lyco.org/lyco/cwp/view.asp?a=3&q=417007>

Macomb County, Michigan Draft Ordinance
http://www.oakgov.com/peds/assets/docs/es_docs/mo_woodlandprotect_macombco.pdf

Village of Riverwoods, Illinois Ordinance 9-6
http://www.riverwoods-il.net/html/PDF/Woodland_Protect_Ord_1-19-05.pdf

West Bloomfield Township, Michigan Ordinances 26-2 and 26-47
<http://library4.municode.com/mcc/DocView/11507/1/209/210, /211>